

IN THE SPECIFICATION:

Paragraph beginning at line 11 of page 9 has been amended as follows:

For example, according to one technique, a single micro cantilever is fabricated by coating a substrate of silicon with a conductive thin film or by implanting ions into a substrate to make the substrate conductive. The resulting micro cantilever has a multi-tip conductive portion whose tips are spaced one from another and a shunt area formed on a distal end portion of the cantilever into which area the tips of the conductive portion merge. In order to obtain a less than 1  $\mu\text{m}$  tip pitch, comb-shaped electrodes that are separated from each other are formed in the shunt area of the distal end portion of the cantilever by an etching process, such as sputter etching or gas assist etching using, for example, a focused ion beam (FIB) apparatus. The comb-shaped electrodes are used as a multi-tip probe. According to another technique, a single cantilever having a multi-tip conductive portion whose tips are spaced one from another and a non-conductive area formed at a distal end portion of the cantilever is fabricated using photolithographic processes. Further, the above-described structure is obtained by depositing metal or carbon on the distal end portion of the

cantilever, which is wired by a patch process, at desired distances by chemical vapor deposition (CVD) using an FIB apparatus. The microscopic multi-tip conductive portions may be formed by making the silicone silicon, i.e. the cantilever, conductive using ion implantation techniques through irradiation with a beam rather than by CVD. It is possible to make processing time shorter by making lead portions that are not required in the microscopic processing as conductors for use with the multi-tip probe etc. in advance.

**Paragraph beginning at line 5 of page 14 has been amended as follows:**

In the present invention, using an FIB apparatus equipped with these functions, a microscopic image of the distal end portion of the above-mentioned cantilever 1 is obtained. As a result, the microscopic image shown in FIG. 2A is obtained. Namely, position information about the distal end portion of the cantilever 1 and pattern information about the shunt area 4 of the distal end portion are obtained. In the present embodiment, on the basis of this position information, the distal end portion is shaped into a rectangular projection 5 of 3.6  $\mu\text{m}$  in width and 2.5  $\mu\text{m}$  in length, as shown in FIG. 2B, using the sputter etching function of the FIB apparatus. Further, using the same sputter etching function of the FIB apparatus, the rectangular

projection 5 ~~are~~ is processed, and the conductive portion of the shunt area 4 is etched in such a manner that electrodes 6 spaced one from another by  $0.8 \mu\text{m}$  distance are left un-etched. As a result, a microscopic electrodes 6 and lead paths 31, one connecting each microscopic electrode 6 and the respective lead path 3, are formed. By carrying out the sputter etching process of the FIB apparatus, the four-tip probe shown in FIG. 2B is formed on the distal end portion of the cantilever. Alternatively, the same shaping may be achieved by the gas assist etching process of the FIB apparatus instead of the sputter etching process of the FIB apparatus. In this alternative, the assist gas comprises a halogen such as chlorine.